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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,512	07/01/2003	Robert L. Muller JR.	22526	4448

535 7590 08/23/2005

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EXAMINER

JOHNSON, STEPHEN

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/611,512

Applicant(s)

MULLER, ROBERT L.

Examiner

Stephen M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) 8 is/are withdrawn from consideration.  
5) ☒ Claim(s) 13-15 is/are allowed.  
6) ☒ Claim(s) 1-7, 9-12 and 16-19 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☒ Claim(s) 1-19 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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1. Applicant's election with traverse of species A in the reply filed on 10/7/2004 and 12/27/2004 is acknowledged. The traversal is on the numerous grounds and is found persuasive.

Species A and B are combined in this application and an action on claims 1-7 and 9-19 follows. Claim 8 remains withdrawn from consideration as being directed to a non-elected species.

2. Claims 11-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Note that claim 10 is a claim of close-ended type with regard to its metal disks "consisting of a metal ... selected from the group of titanium and titanium alloys". Claim 11, which depends from claim 10, claims these limitations and further limitations "other ductile metals or alloy". As such, it claims claim limitations not included in the close-ended claim 10 and this makes the claim indefinite. Further, since claim 11 claims addition possible material types for the metal disks, it is broader than claim 10 from which it depends. This is not appropriate for a dependent claim which must further limit the claim from which it depends.

3. Claims 1, 6-7, and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Patriot.

Patriot discloses an armor comprising:

- |   |                         |
|---|-------------------------|
| a) a woven ballistic fabric;  | 30                      |
| b) weft and warp yarns;   | 30 (see fig. 5)         |
| c) metal disks located at the cross over locations; and             | 35; col. 5, lines 35-40 |
| d) at least one layer of ballistic fibers for trapping projectiles. | 30 (second layer)       |

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4. Applicant's arguments are addressed as follows. It is argued that Patriot teaches a "wire mesh" and not a woven ballistic fabric. In response, first note that the wires of wire mesh 30 are clearly woven. Fig. 5 illustrates the weft layer wires going into the plane of the paper and the warp layers going across the plane of the paper. With regard to the issue of being a "fabric". The term "fabric" is generic in nature and includes any material making up a part of the structure or framework of the assembled article. Consequently, the wire mesh of Patriot meets the claim limitation directed to "a woven ballistic fabric" as claimed. With regard to the argument that Patriot does not disclose "weft and warp yarns traversing any disk which has edges thereof with can shred a projectile", note items 30 and 35 (see fig. 5). Fig. 5 illustrates that metal disks 35 are located at the intersection of the weft and warp wires 30. Further, these metal disks have associated edges that could shred projectiles dependent upon the velocity of the impact projectile and the material of the impact projectile.

With regard to the issue of non-analogous art. (1) Since both applicant's invention and Patriot are directed to laminate sheet materials, they seem to be directed to the same art. (2) Analogous art is only an issue in a 35 USC 103 rejection when references are combined. It has no bearing upon a rejection based on 35 USC 102.

5. Claims 2-3, 9-12, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patriot in view of Nishimura et al..

Patriot applies as previously recited. However, undisclosed is a woven fabric whose material type is an aramid yarn. Nishimura et al. teach a woven fabric whose material type is an aramid yarn (see col. 5, lines 36-50 and example 1). Applicant is substituting one type of woven fabric for another in an analogous art setting as explicitly encouraged by the secondary reference

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(see col. 5, lines 36-40). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Nishimura et al. to the Patriot armor and have an armor with a different type of woven fabric.

6. Applicant's arguments are addressed as follows. It is argued that Nishimura et al. does not disclose "a ballistic fabric supporting metal disks at the crossover". In response, Nishimura et al. is not being relied upon to teach this claim feature, Patriot is. Nishimura et al. is being relied upon for its teaching regarding an alternative type of woven fabric material.

7. Claims 1-7, 9-12, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Harpell et al. (527).

Harpell et al. (527) disclose an armor comprising:

- |   |                                       |
|---|---------------------------------------|
| a) a woven ballistic fabric;  | col. 22, lines 36-53                  |
| b) weft and warp yarns;   | col. 22, lines 36-53;<br>figs. 15, 18 |
| c) metal disks located at the cross over locations;                 | 16, see fig. 18                       |
| d) at least one layer of ballistic fibers for trapping projectiles; | 12c                                   |
| e) a woven ballistic fabric of aramid fiber;                        | col. 22, lines 49-51                  |
| f) a plurality of layers.   | see fig. 4                            |

8. Applicant's arguments are addressed as follows. It is argued that Harpell et al. does not teach "disks at crossover locations in the sense of the present claims". In response, the present claims require "yarn crossovers between weft and warp yarns and metal disks resistant to disintegration .... traversed by at least one of the weft and warp yarns at the crossovers". In response, clearly the thread arrangements of fig. 18 cross over each other in such a fashion that

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the horizontal threads could be described as weft and the vertical as warp yarns. Further, the threads clearly crossover at location traversing metal disk 16 (see fig. 18).

9. Claims 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Groves (679).

Groves (679) discloses an armor comprising:

- a) beads with edges positioned to engage projectiles; and 21 or 22 or 42 or 43
- b) a fabric capturing layer. 18 or 36 or 33

10. Claims 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Dunbar (256).

Dunbar (256) discloses an armor comprising:

- a) beads with edges positioned to engage projectiles; and 16
- b) a fabric capturing layer. 13

11. Claims 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Clausen et al..

Clausen et al. disclose an armor comprising:

- a) beads with edges positioned to engage projectiles; and M; col. 5, lines 55-64
- b) a fabric capturing layer. L; col. 5, lines 6-15

12. Claims 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Chaput.

Chaput discloses an armor comprising:

- a) beads with edges positioned to engage projectiles; and 37 or 83 or 109
- b) a fabric capturing layer. 46 or 48 or 22

13. Claims 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Neal (690 B1).

Neal (690 B1) discloses an armor comprising:

- a) beads with edges positioned to engage projectiles; and 223
- b) a fabric capturing layer. 225

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14. Claims 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Chediak et al..

Chediak et al. disclose an armor comprising:

a) beads with edges positioned to engage projectiles; and figs. 4-11

b) a fabric capturing layer. 14

15. Claims 13-15 are allowed.

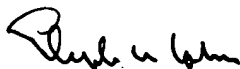
16. Applicant's arguments filed on 6/20/2005 have been fully considered but they are not persuasive. These arguments have been addressed in the preceding paragraphs of this Office action.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Attached definitions of the terms "fabric" and "yarn" according to Webster's.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877. The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The Central FAX phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.



**STEPHEN M. JOHNSON**  
**PRIMARY EXAMINER**

Stephen M. Johnson  
Primary Examiner  
Art Unit 3641

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SMJ

August 20, 2005